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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

MRUK, GEOFFREY S

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bohorquez et al. (US 5,736,995).

With respect to claim 1, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium using a plurality of recording heads (Fig. 1, printhead; Column 1, lines 55-57) which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles (Column 1, lines 29-67; Column 2, lines 1-14), the apparatus comprising:

- a common plate (Fig. 3, element 40) on which a plurality of recording element substrates are arranged, each of said plurality of recording element substrates being provided with a plurality of the heating means and said plurality of recording element substrates being provided for respective recording heads of the plurality of recording heads (Column 1, lines 66-67; Column 2, lines 1-14, i.e. silicon substrate and structures built on the substrate);
- recording mode setting means (Column 3, lines 61- 67, i.e. firing pulses) for setting a recording head that is to be used for recording and a recording head

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that is not to be used for recording, from among the plurality of recording heads (Column 3, lines 61-67, i.e. non-firing pulses); and

- control means (Fig. 1, element 30) for heating the recording head that is set by said recording mode setting means to be not used for recording to adjust the temperature of the recording head to be used for recording (Column 6, lines 9-35) utilizing heat conduction (Column 4, line 46).

With respect to claim 2, Bohorquez discloses said control means (Fig. 1, element 30) causes the heating means for the recording head (Fig. 1, printhead) that is not to be used for recording to generate heat such that the ink is not ejected from the recording head (Column 4, lines 1-24).

With respect to claim 3, Bohorquez discloses said control means (Fig. 1, element 30) causes heating of the recording head (Fig. 1, printhead) that is not to be used for recording while the recording head to be used for recording performs recording (Column 6, lines 9-35).

With respect to claim 5, Bohorquez discloses an inkjet recording apparatus for performing recording by ejecting ink onto a recording medium using a plurality of recording heads (Fig. 1, printhead; Column 1, lines 55-57) which apply heat to the ink with heating means to generate bubbles in the ink and to eject the ink with the pressure of the bubbles (Column 1, lines 29-67; Column 2, lines 1-14), the apparatus comprising:

- a common plate (Fig. 3, element 40) on which a plurality of recording element substrates are arranged, each of said plurality of recording element substrates being provided with a plurality of the heating means, and said plurality of

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recording element substrates being provided for respective recording heads of the plurality of recording heads (Column 1, lines 66-67; Column 2, lines 1-14, i.e. silicon substrate and structures built on the substrate);

- discrimination means (Fig. 1, element 28) for discriminating between a recording head that is to be used and a recording head that is not to be used for the next recording to be performed (Column 4, lines 51-59); and
- control means (Fig. 1, element 30) for heating the recording head discriminated by said discrimination means to be not before the recording head discriminated to be used for recording starts a recording operation to adjust the temperature (Column 6, lines 9-35) of the recording head to be used utilizing heat conduction (Column 4, line 46).

With respect to claim 6, Bohorquez discloses a heater for heating provided independently of the heating means is used as said control means (Column 3, lines 6-10).

Response to Arguments

Applicant's arguments filed 11 October 2005 have been fully considered but they are not persuasive.

The Applicant's argument that "Bohorquez et al. does not disclose or suggest setting a recording head that is to be used for recording and a recording head that is not to be used for recording, or discriminating between a recording head that is to be used and a recording head that is not to be used for a next recording" and Figure 3 "does not

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depict a common plate on which a plurality of recording element substrates are arranged” are not persuasive. However, as cited in the final action rejection Bohorquez states “The present invention reduces the range of drop volume variation by heating the printhead substrate to a reference temperature before printing begins and controlling that temperature during printing by using non-firing pulses synchronized with the firing pulses used to eject printing drops” (Column 3, lines 62-67) and “The typical thermal inkjet printhead (i.e., the silicon substrate, structures built on the substrate, and connections to the substrate) uses liquid ink (i.e., colorants dissolved or dispersed in a solvent). It has an array of precisely formed nozzles attached to a printhead substrate that incorporates an array of firing chambers, which receive liquid ink from the ink reservoir. Each chamber has a thin-film resistor, known as a thermal inkjet firing chamber resistor, located opposite the nozzle so ink can collect between it and the nozzle” (Column 1, lines 66-67; Column 2, lines 1-7). Therefore, Bohorquez meets the claimed limitations.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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1/10/2006

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1/12/06
MANISH S. SHAH
PRIMARY EXAMINER